

AMENDMENTS

AMENDMENTS TO THE CLAIMS

1. (Withdrawn – Currently Amended) A method comprising:
providing a composition comprising water and a dispersion of solid particles comprising an internally crosslinked polymer formed by polymerizing at least one non-ionic hydrophobic substituent compound (or monomer), a cross-linker, and non-ionic N-isopropyl acrylamide, wherein the non-ionic hydrophobic compound (or monomer) comprises acrylonitrile and the polymer releases heat over a range of dropping ambient temperatures below 0 degrees C; and
coating at least a portion of a surface of a plant with the composition.
2. – 14. (Canceled)
15. (Withdrawn) The method of claim 1, wherein the particles are nanoparticles.
16. (Withdrawn) The method of claim 1, wherein each of the particles has a molecular weight of from about 500,000 to about 50,000,000.
17. (Withdrawn) The method of claim 1, wherein the particles have an average diameter of from about 2 nanometers to about 1000 nanometers.
18. – 66. (Canceled)
67. (Withdrawn – Currently Amended) A method comprising:
providing a composition comprising water and a dispersion of solid particles comprising an internally crosslinked polymer formed by polymerizing at least one non-ionic hydrophobic substituent compound (or monomer), a cross-linker, and non-ionic N-isopropyl acrylamide, wherein the non-ionic hydrophobic compound (or

monomer) comprises acrylonitrile and the polymer releases heat over a range of dropping ambient temperatures below 0 degrees C;
coating at least a portion of a surface with the composition; and
preventing the formation of ice on the surface.

68. (Withdrawn – Currently Amended) A method comprising:
polymerizing at least one non-ionic hydrophobic ~~substituent~~ compound (or monomer), a cross-linker, and non-ionic N-isopropyl acrylamide to form solid nanoparticles having an average diameter of from about 11 nanometers to about 450 nanometers, the nanoparticles comprising an internally crosslinked polymer, wherein the non-ionic hydrophobic compound (or monomer) comprises acrylonitrile and the polymer releases heat over a range of dropping ambient temperatures below 0 degrees C;

forming a composition comprising water and a dispersion of the solid nanoparticles; and

coating at least a portion of a surface of a plant with the composition.

69. (Currently Amended) A composition comprising:
an aqueous dispersion of solid particles comprising an internally crosslinked polymer formed by polymerizing at least one non-ionic hydrophobic ~~substituent~~ compound (or monomer), a cross-linker, and non-ionic N-isopropyl acrylamide, wherein the non-ionic hydrophobic compound (or monomer) comprises acrylonitrile and the polymer releases heat over a range of dropping ambient temperatures below 0 degrees C, the composition adapted to form a coating over at least a portion of a surface of a plant, the coating weighing from about 0.5% to about 3% of a weight of a coated portion of the plant.

70. (Withdrawn – Currently Amended) A composition comprising:

water droplets comprising a dispersion of solid particles comprising an internally crosslinked polymer formed by polymerizing at least one non-ionic hydrophobic ~~substituent compound (or monomer)~~, a cross-linker, and non-ionic N-isopropyl acrylamide, wherein the non-ionic hydrophobic compound (or monomer) comprises acrylonitrile and the polymer releases heat over a range of dropping ambient temperatures below 0 degrees C, the composition adapted to be coated on at least a portion of a surface of a plant.

71. (Previously Presented) The composition of claim 69, wherein the polymer releases heat over a range of dropping ambient temperatures ending at about -3.89 degrees C.
72. (Canceled)
73. (Canceled)
74. (Previously Presented) The composition of claim 69, wherein the particles are nanoparticles.
75. (Previously Presented) The composition of claim 69, wherein each of the particles has a molecular weight of from about 500,000 to about 50,000,000.
76. (Previously Presented) The composition of claim 69, wherein the particles have an average diameter of from about 2 nanometers to about 1000 nanometers.
77. – 81. (Canceled)
82. (Previously Presented) The composition of claim 69, wherein the particles have an average diameter of less than about 200 microns.

83. (Withdrawn) The composition of claim 70, wherein the water droplets are coated with a hydrated polymer gel.
84. (Withdrawn) The composition of claim 70, wherein the water droplets are coated with a hydrated polymer gel that, when applied to at least a portion of a surface of a plant, releases heat over a range of dropping ambient temperatures beginning at about 0 degrees C.
85. (Withdrawn – Currently Amended) A composition comprising:
a foam comprising an aqueous dispersion of solid particles comprising an internally crosslinked polymer formed by polymerizing at least one non-ionic hydrophobic ~~substituent~~ compound (or monomer), a cross-linker, and non-ionic N-isopropyl acrylamide, wherein the non-ionic hydrophobic compound (or monomer) comprises acrylonitrile and the polymer releases heat over a range of dropping ambient temperatures below 0 degrees C .
86. (Withdrawn) The composition of claim 85, wherein the foam comprises a hydrated polymer gel.
87. (Withdrawn) The composition of claim 85, wherein the foam comprises air bubbles.
88. (Withdrawn) The composition of claim 85, wherein the foam comprises air bubbles having a diameter in the range of from about 10 microns to about 100 microns.